

a¹
cond.
applying the laser output pulses to the target so that the laser output pulses cleanly remove at least two layers within the spatial spot size.

a²
3. (Amended) The method of claim 2 in which the organic dielectric material [is selected from] comprises PTFE, polyimides, epoxies, BT, phenolics, cyanate esters, paper, cardboard, or combinations thereof; the reinforcement material [is selected from] comprises glass, aramid fibers, *Kevlar* TM, ceramics, or combinations thereof; and the ¹metal [is selected from] comprises aluminum, titanium, nickel, copper, tungsten, platinum, gold, molybdenum, palladium, silver, or combinations thereof.

✓ Claim 5, line 2, delete [structure].

✓ Claim 6, line 2, after "is", insert

--less--

a³
for
4. (Amended) The method of claim 1 in which [the] several pulses are employed to remove a spatial region of the target [area] that is greater than 25 ^{μm} *in diameter*

✓ Claim 9, line 2, delete [target].

a⁴
13. (Amended) [A] The method of [increasing the saturation depth of cut per pulse in a target material as a function of increasing power density of a laser beam pulse striking the target material to cause a depthwise removal of target material within a spatial region thereof, comprising:

producing high-power ultraviolet light output pulses generated by a solid-state laser, the light output pulses having a power density per pulse and] claim 1 in which the spatial spot size defines a spot area that is smaller than [the] and lies within a spatial region of the target [material; and], the method further comprising:

directing the [light] laser output pulses sequentially to multiple positions associated with the spatial region to remove multiple amounts of target material corresponding to the spot [area and with minimal depth of cut per pulse saturation to a

A4
Cnd.
depth corresponding to the power density per pulse of the light output pulses] areas.

Cancel claim 14.

Amend claims 15 and 16 as follows.

Claim 15, line 3, change [light] to

--laser--.

Claim 16, line 3, change [light] to

--laser--.

Cancel claims 18-21.

A5 Sub 62
~~2022~~ The method of claim 1 in which each pulse cleanly removes at least two layers within the spatial spot size.

Add the following claims.

21--23. The method of claim 1 further comprising creating a blind via having a depth:diameter aspect ratio that is greater than 1.--

22. The method of claim 1 further comprising creating a via having a depth:diameter aspect ratio that is greater than 2.--

23. The method of claim 22 in which the via is a through hole.--

A6 Sub 62
B
--26. The method of claim 15 in which the laser output pulses are generated at a repetition rate of greater than about 1 kHz; in which the target comprises at least an organic dielectric material, a reinforcement material, and a metal; and in which the organic dielectric material comprises PTFE, polyimides, epoxies, BT, phenolics, cyanate esters, paper, cardboard, or combinations thereof; the reinforcement material comprises glass, aramid fibers, Kevlar[®], ceramics, or combinations thereof; and the metal comprises aluminum, titanium, nickel, copper, tungsten, platinum, gold, molybdenum, palladium, silver or combinations thereof.--

B
24. The method of claim 26 in which the spatial spot size is less than about 50 μm , ^{in diameter and} the layers have a combined depth of greater than about 25 μm .--